

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection**

A335226279

FACILITY: BARRETT PAVING MATERIALS INC		SRN / ID: A3352
LOCATION: 67 MARY, MOUNT CLEMENS		DISTRICT: Southeast Michigan
CITY: MOUNT CLEMENS		COUNTY: MACOMB
CONTACT: Danielle Hampsher, Safety & Environmental Coordinator		ACTIVITY DATE: 08/04/2014
STAFF: Erik Gurshaw	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: 2014 FCE Inspection		
RESOLVED COMPLAINTS:		

SRN: A3352

COMPANY: Barrett Paving Materials, Inc.

COMPANY ADDRESS: 67 Mary Street, Mount Clemens, MI 48046

PURPOSE OF INSPECTION: Targeted

CONTACT PERSON: Ms. Danielle Hampsher, Safety & Environmental Coordinator (Cell: 734-216-6284; Email: [DHampsher@barrettpaving.com](mailto:DHampsher@barrettpaving.com))

COMPANY PHONE NUMBER: 586-465-0880

On August 4, 2014, AQD staff, Erik Gurshaw, conducted a targeted, unannounced inspection of Barrett Paving Materials, Inc. located at 67 Mary Street in Mount Clemens, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department Environmental Quality, Air Quality Division (MDEQ-AQD) Rules; Permit To Install (PTI) Number 766-87C for a hot melt asphalt plant (HMA) and associated equipment; and NSPS Subpart I for Hot Mix Asphalt Facilities. NSPS Subpart I requirements have been incorporated into the plant's PTI.

Upon arriving at the site, AQD staff introduced themselves and stated the purpose of the visit to Mr. David Gaedcke (Ph: 586-465-0880; Cell: 734-341-3189; Fax: 586-465-0973; Email: [dgaedcke@barrettpaving.com](mailto:dgaedcke@barrettpaving.com)), Plant Supervisor at Barrett Paving's Mount Clemens' plant. Mr. Gaedcke said that Ms. Danielle Hampsher is the environmental compliance contact for the company, but he assisted AQD staff on the inspection. Barrett Paving makes asphalt for commercial building and road contractors. The plant operates from 7:00 AM until 3:00 PM or from 7:00 AM until 7:00 PM Monday through Friday depending upon asphalt demand. 3 people are employed to run the plant. Equipment at the plant includes the following: a drying drum and associated burner; a cove mixing drum; 2 asphalt silos; aggregate bins; a wheel loader; a baghouse; a drag slat; a 50,000 gallon liquid asphalt storage tank; a 55,000 gallon liquid asphalt storage tank; 6 virgin aggregate hoppers; 2 recycled asphalt product (RAP) bins; and a HEATEC Model 200 natural gas fired boiler with a maximum rated heat capacity of 2 MBtu per hour. The boiler is used to provide heat to the liquid asphalt storage tanks and the process lines within the plant. The liquid asphalt storage tanks and asphalt silos are permitted, but no applicable conditions for them are listed in the PTI. The boiler is exempt from PTI requirements pursuant Rule 282(b)(i). The plant was not operating at the time of the inspection.

Asphalt is produced by loading the desired aggregate mix into feed hoppers. The typical aggregates used by the plant are 20AA road gravel, 3CS sand, and 3/8" x 1/4" stone. From the feed hoppers, the aggregate is conveyed to a counter flow drying oven where the material is heated and dried at 700 degrees Fahrenheit for 30 seconds. The hot aggregate mix is then conveyed to a cove drum where RAP and liquid asphalt is introduced into the mix. The resulting asphalt product is mixed in the cove drum for 4 to 5 minutes before being conveyed to a drag slat. From the drag slat, the final product is conveyed to the asphalt storage silos. Asphalt production occurs continuously while the plant is operating. The final asphalt product can be altered by changing the virgin aggregate and RAP mixture at the beginning of the process. Besides virgin aggregate and RAP, the plant also uses end cut shingles in its asphalt production process. End cut shingles are considered to be another source of RAP.

PTI #766-87C was issued to the company on April 15, 2004. The PTI contains the following Emission Units and Flexible Groups: EUHMAPLANT; EUYARD; and FGFACILITY. EUHMAPLANT sets operating conditions for the hot mix asphalt plant. EUYARD sets conditions for the control of fugitive dust from the plant yard. FGFACILITY sets 12-month rolling individual and aggregate hazardous air pollutant (HAP) limits for the entire facility. The inspection indicated the following with respect to compliance with the PTI:

### EUHMAPLANT

Stack testing conducted by NTH Consultants on October 30, 2003, October 31, 2003, November 6, 2003, and November 7, 2003, indicated that emissions from the plant were below the emission limits established in the permit for the following compounds: carbon monoxide; sulfuric acid; benzene; ethyl benzene; lead; manganese; nickel; naphthalene; formaldehyde; and acrolein. Emissions of arsenic were above the permitted limit during the 2003 stack test, however. PTI #766-87B was then modified to PTI #766-87C on April 15, 2004. PTI #766-87C established emission limits for sulfur dioxide, particulate matter, and hydrogen chloride in addition to the limits already established in PTI #766-87B. Subsequent stack testing conducted by NTH Consultants on August 4, 2005, and August 5, 2005, indicated that emissions from the plant were below the emission limits established in PTI #766-87C for sulfur dioxide, particulate matter, and hydrogen chloride, but still above the emission limit set for arsenic. The AQD sent the company a Violation Notice (VN) on February 14, 2006, as a result of the exceedance of the arsenic emission limit as determined during the August 2005 stack test. Stack testing which took place on August 8, 2006, indicated that arsenic emissions were below the limits set in the PTI. The plant failed the August 2005 stack test for arsenic due to a malfunction of its bag cleaning system. The emission factors established during these stack tests are used by the company to calculate its emissions.

The plant has used natural gas exclusively to fuel the burner in its drying oven since 2008. This satisfies Special Condition 1.2 of its PTI. No hazardous waste or asbestos containing materials are being burned by the plant as required by Special Conditions 1.3 and 1.4 of the PTI. RAP is being limited to a maximum of 50% of the total asphalt mixture per month as required by Special Condition 1.5 of the PTI. The plant is making less than 894,000 tons of asphalt per 12-month rolling time period and less than 250 tons per hour as required by Special Conditions 1.6 and 1.7 of its PTI. The company has not used recycled used oil (RUO) since 2008. Therefore, Special Condition 1.7 and the RUO Compliance Monitoring Plan in Appendix C of the PTI are not applicable to the plant's current operations. The plant is abiding by the Fugitive Dust Control Plan in Appendix A of its PTI as required by Special Condition 1.9 of its PTI. Specifically, the plant is employing the following measures to control fugitive dust: sweeping takes place once a week on paved roads; calcium chloride is applied to the plant yard once a month; 5 MPH speed limit signs are posted around the plant yard to limit fugitive dust production from vehicle traffic (10 MPH is the speed limit listed in the PTI, but the plant has 5 MPH signs posted); the drop distance is being minimized during the stockpiling of aggregate; aggregate spilled on roadways is immediately cleaned up; incoming trucks carrying aggregate are tarped; outgoing trucks carrying asphalt are tarped; the bucket of the wheel loader is loaded to avoid overfilling to prevent material spillage; records of the sweeping of the paved roads and calcium chloride applications to the plant yard are being maintained; and malfunctions from the plant's process equipment and the baghouse are immediately corrected to prevent fugitive emissions. The burner associated with the drying oven is tuned at the start of each paving season as required by Special Condition 1.10 of the PTI. The baghouse is being properly operated and maintained. Specifically, the plant is taking the following preventative maintenance measures on the baghouse as required by Appendix B of its PTI: the pressure drop across the baghouse is being recorded daily (the pressure drop needs to be between 2" and 6" of water column); a high temperature alarm is set to shut down the plant in the event that the temperature within the baghouse exceeds 375 degrees Fahrenheit; any particulate matter collected by the baghouse is recirculated back into the asphalt mix; a black light test on the bags within the baghouse is conducted at the start of each paving season; at least 15 new bags are kept on site at all times; and baghouse maintenance records are being recorded on the plant's daily DEQ Reporting Forms. The virgin aggregate and RAP feed rate are being continuously recorded

as required by Special Condition 1.15 of the PTI. CO emissions are being monitored with a handheld monitor at the start of each paving season as required by Special Condition 1.16 of the PTI. CO emissions measured with a handheld monitor were 280 ppm on May 14, 2014, at 11:20 AM. Natural gas usage records are being recorded daily as required by Special Condition 1.19 of the PTI. The plant keeps maintenance records as required by Special Condition 1.22 of the PTI on its daily DEQ Reporting Form. The plant is maintaining the following daily records as required by Special Condition 1.23 and 1.24 of its PTI: the type and amount of fuel used; the tons of asphalt produced containing RAP and the percentage of RAP in the asphalt; the virgin aggregate feed rate; the RAP feed rate; the temperature of the asphalt while it is being produced; and the physical makeup of the final asphalt product. The plant is maintaining 12-month rolling CO and SO<sub>2</sub> emission records, 12-month rolling HMA production records, and 12-month rolling fuel records as required by Special Conditions 1.25, 1.27, and 1.28 of the PTI, respectively. 12-month rolling records from January 2013 through July 2014 indicate that the highest emission of SO<sub>2</sub> and CO was 10.23 tons each occurring from July 2013 through July 2014. This is well below the 89.4 ton per 12-month rolling time period emission limit for each pollutant established in the PTI. During the 2014 construction season, the highest 12-month rolling HMA production rate was 105,283 tons occurring from August 2013 through July 2014. This is well below the 894,000 ton HMA production limit established in the PTI. Even though the plant is required to maintain 12-month rolling fuel usage records, the PTI does not set a fuel usage limit. AQD staff verified that the stack from the plant exhausts unobstructed vertically to the ambient air and that it meets the dimensions specified in Special Condition 1.29 during the inspection.

#### EUYARD

The plant is abiding by the Fugitive Dust Control Plan in Appendix A of its PTI to control fugitive dust from the plant yard. The plant is also reporting particulate matter emissions from the plant yard in its annual MAERS report.

#### FGFACILITY

The plant is maintaining 12-month rolling individual and aggregate HAP emission records. Emission factors established during the stack tests are used to calculate HAP emissions. Records from January 2013 through July 2014 indicate that the plant is emitting far less than 8.9 tons of any single HAP and 22.4 tons of aggregate HAPs per 12-month rolling time period. The highest 12-month rolling emission of a single HAP from January 2013 through July 2014 was 0.31 tons of benzene and hydrogen chloride occurring from July 2013 through June 2014 and from August 2013 through July 2014. The highest emission of aggregate HAPs over the same time period was 1.16 tons occurring from July 2013 through June 2014. 8.9 tons and 22.4 tons are the emission limits established for individual HAPs and aggregate HAPs, respectively, in the PTI.

Based on this inspection, it was determined that Barrett Paving Materials' Mount Clemens plant is in compliance with its PTI and all other applicable air rules and regulations. The following records are attached to this report: the last 2 tuning records for the drying drum's burner from Combustion Services, Inc.; calcium chloride application invoices from Road Maintenance Corp. for May 2014 and June 2014; yard sweeping invoices from May 1, 2014, through July 24, 2014, from Armadillo Services, Inc.; daily, monthly, and 12-month rolling natural gas fuel usage records from January 2014 through July 2014; daily, monthly, and 12-month rolling production records from January 2014 through July 2014; 12-month rolling HAP, CO, and SO<sub>2</sub> emission records from January 2013 through July 2014; and daily DEQ Reporting Forms from June 2, 2014, through July 31, 2014. The DEQ Reporting Forms contain daily records of the following: weather data; any opacity emanating from the stack; the pressure drop across the baghouse; the amount of natural gas used, the amount of liquid asphalt used; the amount of virgin aggregate used; the amount of RAP used; the amount of asphalt produced; hourly burner usage; the daily average of tons of asphalt produced per hour; the percentage of RAP used in the daily asphalt mixture; an indication of whether chloride or water was applied to the yard; and an indication of whether the paved roadways were swept.

NAME Erik Gurskaw

DATE 8/7/14

SUPERVISOR CJE